

Claims

1. A stalk roll for a harvesting device for harvesting a crop head from a stalk of a plant, the stalk roll having a crop flow direction, the stalk roll comprising a roll body having a diameter and a periphery, and projecting drivers distributed around the periphery of the roll body have outer edges, characterized by the fact that the diameter of the roll body changes over its length, and that the distance of the outer edges of the drivers from the roll body changes in a complementary fashion.

2. The stalk roll as defined by claim 1 wherein the diameter of the roll body diminishes in the crop flow direction.

3. The stalk roll as defined by claim 1 wherein the stalk roll has a first picking region which engages the stalk of the plant with the crop head attached to the stalk and a second region which engages the stalk of the plant after the crop head has been removed from the stalk, the diameter of the roll body in the first region is greater than in the second region.

4. The stalk roll as defined by claim 3 wherein the outer edges of the drivers in the first region define a smaller diameter than the outer edges of the drivers in the second region.

5. The stalk roll as defined by claim 4 wherein the stalk roll is provided with an inlet region upstream from the first region and the outer edges of the drivers in the first region define a smaller diameter than the outer edges of the drivers in the inlet region.

6. The stalk roll as defined by claim 5 wherein the diameter of the roll body is greater in the picking region than in the inlet region.

7. The stalk roll as defined by claim 1 wherein the diameter of the roll body changes continuously and forms a truncated cone.

8. The stalk roll as defined by claim 1 wherein the diameter of the roll body changes in step-like fashion.

9. The stalk roll as defined by claim 1 wherein the diameter of the outer edges of the drivers changes continuously.

10. The stalk roll as defined by claim 1 wherein the diameter of the outer edges of the drivers changes in step-like fashion.

11. A gathering and picking device of a harvesting device for harvesting a crop head from a stalk of a plant comprising a pair of stalk rolls, the pair of stalk rolls defining a crop flow direction, each stalk roll having a crop flow direction, the stalk roll comprising a roll body having a diameter and a periphery, and projecting drivers

distributed around the periphery of the roll body have outer edges defining an enveloping circle, characterized by the fact that the diameter of the roll body changes over its length, and that the distance of the outer edges of the drivers from the roll body changes in a complementary fashion, the outer edges of the drivers of one stalk roll reach into the enveloping circle of the outer edges of the drivers of the other stalk roll.

12. The gathering and picking device as defined by claim 11 wherein the enveloping circle of the outer edges of the drivers of one stalk roll reach into the space that becomes freed by the reduced diameter of the roll body of the other stalk roll.

13. The gathering and picking device as defined by claim 12 wherein the stalk rolls are arranged parallel to one another.

14. The gathering and picking device as defined by claim 13 wherein each stalk roll has a first picking region which engages the stalk of the plant with the crop head attached to the stalk and a second region which engages the stalk of the plant after the crop head has been removed from the stalk, the diameter of the roll body in the first region is greater than in the second region.

15. The gathering and picking device as defined by claim 14 wherein the outer edges of the drivers in the first region define a smaller diameter than the outer edges of the drivers in the second region.

16. The gathering and picking device as defined by claim 13 wherein each stalk roll is provided with an inlet region upstream from the first region and the outer edges of the drivers in the first region define a smaller diameter than the outer edges of the drivers in the inlet region.

17. The gathering and picking device as defined by claim 13 wherein each diameter of the roll body is greater in the picking region than in the inlet region.